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Carrier

A United Technologies Company

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Docket #04-AAER-1
Docket Office
California Energy Commission
1516 9th Street, Mail Station 4
Sacramento, CA 95814-5512

Carrier Corporation and its Beverage Air division urge your consideration of the issues below related to the 45-day language on commercial refrigeration efficiency standards.

Cabinets with Open Doors

Cabinets with open doors specifically designed for display and sale of bottled or canned beverages are very important merchandising tools for our customers, yet we believe they represent less than 1% of the market in California. Consequently, we urge the CEC to postpone any regulation on this class of products until 2010, allowing the U.S. Department of Energy to thoroughly study and review this application. Significant time and R&D resources would be also required to address this niche market.

While open door coolers are a very small percentage of the market, industry estimates indicate they improve consumer "sales lift" by 30-50% and therefore are important to the beverage market.

Ice Cream Cabinets

In table A7, we believe CEC inadvertently dropped transparent door ice cream cabinets from the rulemaking. We urge CEC to expand the product category to include transparent door ice cream cabinets at the same efficiency levels as reach-in freezers.

Low Temperature Freezers

We urge the CEC regulate freezers only to the lower limit of -20°F. Below -20°F, we urge the CEC to establish a separate exempt product class as "Low Temperature Freezers." We estimate that these niche freezers represent less than 1% of the California market. Given the wide variation in freezing requirements for these products, some as low as -60°F, we believe more time is needed to collect and analyze data for this low-volume class of products.

T8 Fluorescent Lighting in Freezers

We urge CEC to eliminate the requirement for T8 fluorescent lighting in freezers to allow manufacturers the flexibility in meeting the system efficiency requirement in the most cost effective manner that meets customer requirements. Prescriptive, micro-managed requirements for sub-components can add needless design complexity and cost.

Pull Down Cabinets

No reference is made in the standards regarding cabinets that are designed to quickly cool product from ambient temperature. Customers that require products to be chilled quickly after a cabinet reload has been performed mandate this performance level. This increased level of cooling capacity dictates larger refrigeration systems, which results in higher energy consumption.

We urge the CEC to adopt the "Pull Down" provision contained in the ARI Agreement on Legislative and Regulatory Strategy for Obtaining Energy Efficiency Standards for Commercial Refrigerators, Freezers, and Refrigerator Freezers and Related Matters, October 18, 2004, as follows:

For products designed for pull-down temperature applications (defined to be those that can cool a cabinet by at least 4.3 degrees F/hour over a 12 hour period), a standard 5% above the standards specified above will be set as follows, effective Jan. 1, 2010:

Refrigerators with transparent doors: $0.126V + 3.51 \text{ kWh/day}$
Freezers with transparent doors: $0.788V + 4.30 \text{ kWh/day}$

Worktop Cabinets

The definition of Worktop Table should be revised to include Freezers to be consistent with other definitions. Worktop Tables can be either refrigerators or freezers.

Reach-in Cabinets that are Refrigerator-Freezers

The definition of Refrigerator-Freezer does not include a unit with 2 independent refrigeration systems. We recommend changing the wording in the definition to read "...has one or more sources of refrigeration requiring an energy input."

For units with independent systems, we urge the CEC to adopt the maximum daily consumption that would be equal to the sum of both the applicable (transparent or solid door) refrigerator and freezer standards.

Typo Errors in Table V

For Table V on page 131, the description for commercial units under the "Appliance" column seems to have omitted: (1) "with doors" regarding freezers, and (2) "without doors" regarding bottle/can units. Consequently, we recommend that the listing under the "Appliance" heading should read: "...Self-contained commercial freezers with doors, ...sale of bottled or canned beverages without doors"

In the same Table V, the "*Permissible Answers*" column for Type of Illumination does not allow for "None." We recommend adding "none" to the list as an option.

Carrier and Beverage Air would be happy to review these comments in more detail or answer questions as needed.

Thank you for considering our views.

Sincerely,

A handwritten signature in black ink, appearing to read "John M. Mandyck". The signature is written in a cursive, flowing style with a large initial "J".

John M. Mandyck